

Abhinav S Menon

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🌐 <https://github.com/Abhinav271828>

- 2020–2025 **B.Tech. in Computer Science and M.S. by Research in Computational Linguistics**,
International Institute of Information Technology, Hyderabad GPA: 9.2/10
RELEVANT COURSEWORK: Machine, Data and Learning; Introduction to NLP; Advanced NLP;
Discrete Structures; Linear Algebra; Probability and Statistics; Algorithm Analysis and Design;
Information-Theoretic Methods in Computer Science; Operating Systems and Networks.
- 2024 **Visiting Researcher**, *University of Cambridge*
- 2023 **Visiting Student**, *University of Edinburgh*

Publications

- 2024 *Analyzing (In)Abilities of SAEs via Formal Languages*
Abhinav Menon*, Manish Shrivastava, David Krueger, Ekdeep Singh Lubana*
MINT@NeurIPS (Best Paper) 2024 [\[paper\]](#) [\[code\]](#)
Follow-up with positive reviews at ARR Oct 2024.; submitted to NAACL '25. [\[preprint\]](#)
- 2022 *Neural models for factual inconsistency classification with explanations*
Tathagata Raha, Mukund Choudhary, Abhinav Menon, Harshit Gupta, K V Aditya Srivatsa,
Manish Gupta, Vasudeva Varma
ECML PKDD 2023 [\[paper\]](#)

Selected Research Work

- 2023 **Barvinok's Algorithm**, *University of Edinburgh* : Dr. Tobias Grosser, Arjun Pitchanathan *[in progress]*. Implemented Barvinok's algorithm for counting integer points in arbitrary polyhedra in MLIR. <https://github.com/Abhinav271828/mlir-barvinok>
- 2022 **Mutable Grammars**, *University of Edinburgh* : Dr. Tobias Grosser, Dr. Andrés Goens, Siddharth Bhat. Developing a formalism for mutable grammars, which included creating a parser for ANSI C.
- 2022 **Superposition in RNNs**, *IIIT Hyderabad* : Dr. Manish Shrivastava. Studying data compression in toy RNNs with hidden states smaller than input sizes. <https://github.com/Abhinav271828/superposition-S23>

Work Experience

Teaching Assistant : *Discrete Structures* (Dr. Ashok Kumar Das, Dr. Venkatesh Choppella)
Evaluated assignments and exams for over 200 students in topics including abstract algebra, basic cryptography, and formal logic.

Teaching Assistant : *Introduction to NLP* (Dr. Manish Shrivastava)
Evaluated assignments, exams and a project for over 150 students in natural language processing, including statistical and neural methods.

Selected Projects

Dependency Parsing across Languages, <https://github.com/sentient-bread/Dependency>

Implementing a graph-based dependency parser and analyse its performance on English, Hindi and Sanskrit, along with ablation studies on the subtask of POS tagging.

Algorithms in Haskell, <https://github.com/Abhinav271828/hask-algos>

Implemented over twenty algorithms, benchmarked them, and analysed the results with respect to the language, the algorithm, and the implementation.

Honours, Awards, and Programmes

2024	Dean's List 2 for Spring Semester
2022	Winter School on Theoretical Computer Science, IIT-D <i>Visited IIT Delhi and attended talks by researchers on a variety of sub-disciplines of theoretical CS.</i>
2022	Dean's List 2 for Spring Semester
2021	Dean's List 1 for Monsoon Semester
2021	Merit List for Spring Semester
2020	Merit List for Monsoon Semester